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Official

PATENT APPLICATION
Navy Case NO. 77,897

**BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF APPEALS AND INTERFERENCES**

In re Application of: Imam et al.
Serial No.: 08/845,897
Filed: April 28, 1997
For: POROUS METAL/ORGANIC
POLYMERIC COMPOSITES

Examiner: Copenheaver, B.
Group Art Unit: 1771

November 9, 2000

SUPPLEMENTAL APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

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This is a Supplemental Appeal Brief from the Office Action mailed on October 18, 2000. The Office Action, Notification of Non-Compliance with 37 C.F.R. § 1.192(c), is requiring a concise explanation of the claimed invention pursuant to 37 C.F.R. § 1.192(c)(5).

This is an appeal from the final rejection of claims in the Examiner's Action dated April 19, 2000, finally rejecting claims 1-4, 7, 17-22. Claim 11 was rejected in the Office Action dated April 19, 2000, but not indicated as being rejected in the Office Action dated August 3, 2000, and therefore it is being considered a rejected claim for purposes of this Supplemental Appeal Brief.

V.

SUMMARY OF THE INVENTION

1. An acoustically damping composite article, comprising
 Page 3, lines 4-5
 a non-elastomeric polymer matrix
 Page 9, lines 14- 16, and Page 12, line 1.
 having therein a metal foam
 Page 17, line 24 to Page 18, line 5.
 said metal foam having an open cell structure being
 impregnated with said polymeric matrix
 Page 5, lines 12-15.
 so as to completely penetrate said open cell structure of said
 foam and fill the cells thereof.
 Page 8, lines 17- 20.
2. The composite article of claim 1, wherein said metal is

selected from the group consisting of aluminum, aluminum base alloys, titanium, titanium base alloys, nickel, nickel base alloys, copper, copper base alloys, iron, iron base alloys, zinc, zinc base alloys, lead, lead base alloys, silver, silver base alloys, gold, gold base alloys, platinum, platinum base alloys, tantalum, and tantalum base alloys.

Page 5, lines 15-18.

3. The composite article of claim 1, wherein said polymer is selected from the groups consisting of epoxies, acrylics, hardened silicones, polyurethanes, polyimides, polyvinyls, polycarbonates, hardened natural rubbers, hardened synthetic rubbers, phenolics, polyolefins, polyamides, polyesters, fluoropolymers, poly(phenylene ether ketones), poly(phenylene ether sulfones), poly(phenylene sulfides) and melamine-formaldehyde resins.

Page 9, lines 17-23.

4. The composite article of claim 1, wherein said metal is an aluminum base alloy foam.

Page 5, lines 16-17.

7. The composite article of claim 3, wherein said metal is aluminum foam or an aluminum base alloy foam.

Page 5, lines 16-17.

11. The composite article of claim 1, wherein said polymer is an epoxy.

Page 9, 18.

17. The composite article of claim 1, wherein said cells have a locally uniform diameter.

Page 7, lines 9-17.

18. The composite article of claim 17, wherein said metal foam has a gradation of pore sizes in at least one direction along the metal.

Page 7, lines 17-23.

19. A composite article according to claim 1, wherein said composite article is in the form of a sheet.

Page 10, lines 25 to Page 11, line3.

20. A laminate comprising a stack of sheets according to claim 19 bonded together.

Page 12, lines 13-15 and Example10, Page 19, lines 12-14.

21. An acoustically damping composite article, comprising a polymeric matrix having therein a metal foam

Page 3, lines 4-5, Page 9, lines 14-16, Page 12, line 1,

and Page 17, lines 25 to Page 18, line 5.
said metal foam having an open cell structure,
Page 5, lines 12-15.
said metal foam being impregnated with said polymeric matrix
Page 5, lines 12-15.
so as to completely penetrate said open cell structure of said
foam and fill the cells thereof,
Page 8, lines 17-20.

said metal foam thickness no less than 3 times the average
diameter of said cells.

Page 11, lines 3-6.

22. A method of forming a composite comprising the steps of:

Example 2, Page 14, line 10.

impregnating a metal foam,

Example 3, Page 15, lines 6-10.

said metal foam having an open cell structure,

Example 3, Page 15, lines 3-6.

with a resin component

Example 3, Page 15, lines 6-10.

so as to completely penetrate said open cell structure

Example 3, Page 15, lines 11-13.

and fill open cells of said metal foam with said resin
component; and

Example 3, Page 15, lines 11-15.

converting said resin component within said cells, to a bulk
solid, non-elastomeric polymerized resin

Page 8, lines 9-14, and Page 9, lines 13-16.

thus forming a composite comprising a matrix of said non-
elastomeric polymerized resin,

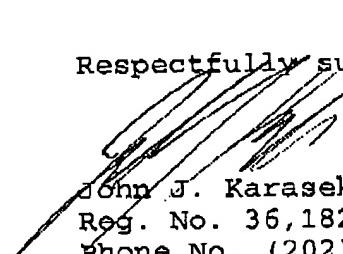
Page 5, lines 12-15, and Page 9, lines 13-16.

said matrix having therein said metal foam.

Example 7, Page 18, lines 2-8.

Kindly charge any additional fees due, or credit overpayment
of fees, to Deposit Account 50-0281.

Respectfully submitted,


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